

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A device for transporting biological fluid, ~~in at least a part of an extracorporeal circuit, said at least part of the extracorporeal circuit being disposable and comprising:~~

at least one pressure sensor ~~configured to be in fluid communication with the biological fluid~~ configured for sensing a difference between a pressure of the biological fluid and a reference pressure,

wherein the at least one pressure sensor comprising an electric circuit that is configured to be energized by an applied a first alternating first-electromagnetic field generated by an external transmitter inductively coupled to the pressure sensor and configured to communicate information indicative of a pressure from the pressure sensor via a second alternating electromagnetic field to an external receiver inductively coupled to the pressure sensor, ~~wherein the at least one pressure sensor is configured for sensing a difference between a pressure of the biological fluid and a reference-pressure~~ the second alternating electromagnetic field causes a current-dip in the external receiver,

wherein the device is in at least a part of an extracorporeal circuit, said at least part of the extracorporeal circuit being disposable.

2. (Previously Presented) The device of claim 1, wherein the sensor comprises a compressible container capable of indicating pressure through compression or expansion.

3. (Currently Amended) The device of claim 2, wherein the pressure sensor further comprises at least one component chosen from a capacitor and an inductor, said component forming a resonance circuit for the applied first alternating electromagnetic field, wherein said component is configured to vary with the compression and/or expansion of the container.

4. (Previously Presented) The device of claim 3, wherein the component is a capacitor.

5. (Previously Presented) The device of claim 2, wherein the container includes a substantially rigid box having a membrane.

6. (Previously Presented) The device of claim 5, wherein a portion of the component is arranged on the membrane.

7. (Previously Presented) The device of claim 6, wherein a portion of the component is configured to vary with a movement of the membrane.

8. (Previously Presented) The device of claim 7, wherein a portion of the component is formed from or by the membrane.

9. (Canceled).

10. (Previously Presented) The device of claim 1, wherein the pressure sensor is disposed within the device.

11. (Previously Presented) The device of claim 1, wherein the first and second alternating electromagnetic fields are the same electromagnetic field.

12. (Currently Amended) The device of claim 1, wherein the frequency of the first and second alternating electromagnetic fields ~~include~~ is a radio frequency.

13. (Previously Presented) The device of claim 1, wherein the pressure sensor is connected to the extracorporeal circuit such that it forms a portion of the circuit.

14. (Previously Presented) The device of claim 1, wherein the device is insert molded.

15. (Previously Presented) The device of claim 1, wherein the sensor is glued or welded to a wall of the extracorporeal circuit in a manner that establishes a seal between the sensor and the circuit.

16. (Previously Presented) The device of claim 1, wherein at least a part of the extracorporeal circuit is configured for at least one application chosen from dialysis, blood separation, blood donation, hemofiltration, and cardiopulmonary bypass.

17. (Previously Presented) The device of claim 1, wherein at least a part of the extracorporeal circuit chosen from a dialyser, cassette, ultrafilter, tube, connector, container, chamber, fluid bag, blood container, collection bags, pump segment part of lineset, and oxygenator.

18. (Previously Presented) The device of claim 1, wherein the reference pressure includes atmospheric pressure.

19. (Previously Presented) The device of claim 1, wherein the device is used during extracorporeal biological fluid management.

20. (Previously Presented) The device of claim 19, wherein the fluid is blood.

21. (Previously Presented) The device of claim 19, wherein the management is dialysis.

22. (Previously Presented) A system for managing biological fluids, comprising:

the device of claim 1;

at least one transmitter configured to transmit an alternating electromagnetic field to the sensor in the device;

at least one receiver configured to receive radio frequency information from the device, wherein the received information is indicative of a pressure sensed by the device; and

a control unit configured to control the transmitter and the receiver.

23. (Canceled).

24. (Previously Presented) The system of claim 22, wherein the system forms part of a dialysis machine.

25. (Previously Presented) The system of claim 22, wherein the system is used during extracorporeal biological fluid management.

26. (Previously Presented) The system of claim 25, wherein the fluid is blood.

27. (Previously Presented) The system of claim 25, wherein the management is dialysis.

28. (Currently Amended) A method of pressure sensing in a biological fluid using the system of claim 22, comprising the steps:

providing at least one first alternating electromagnetic field to the pressure sensor;

sensing ~~the~~ at least one second alternating electromagnetic field at an external receiver inductively coupled to the pressure sensor, wherein the second alternating electromagnetic field is generated as modified by a the pressure sensor configured to affect a field in dependence on pressure based on the first alternating electromagnetic field and a pressure change of the biological fluid, wherein the second alternating electromagnetic field causes a current-dip in the external receiver; and

providing the sensed field as a signal that is indicative of the pressure sensed by the sensor.

29. (New) A device for transporting biological fluid, comprising:
at least one pressure sensor in fluid communication with the biological fluid configured for sensing a difference between a pressure of the biological fluid and a reference pressure, wherein the at least one pressure sensor comprises:

a container exposed to the atmosphere outside the extracorporeal circuit, such that the reference pressure within the container is equal to atmospheric pressure; and

an electric circuit within the container, wherein the electric circuit is configured to be energized by a first alternating electromagnetic field generated by an external transmitter inductively coupled to the pressure sensor and configured to communicate information indicative of a pressure from the pressure sensor via a second alternating electromagnetic field to an external receiver inductively coupled to the pressure sensor, wherein the second alternating electromagnetic field causes a current-dip in the external receiver,

wherein the device is in at least a part of an extracorporeal circuit, said at least part of the extracorporeal circuit being disposable.

30. (New) The device of claim 29, wherein the container is a compressible container capable of indicating pressure through compression or expansion.

31. (New) The device of claim 30, wherein the pressure sensor further comprises at least one component chosen from a capacitor and an inductor, said component forming a resonance circuit for the first alternating electromagnetic field, wherein said component is configured to vary with the compression and/or expansion of the container.

32. (New) The device of claim 31, wherein the component is a capacitor.
33. (New) The device of claim 29, wherein the frequency of the first and second alternating electromagnetic fields is a radio frequency.
34. (New) The device of claim 29, wherein the pressure sensor is connected to the extracorporeal circuit such that it forms a portion of the circuit.
35. (New) The device of claim 29, wherein the device is insert molded.